

We claim:

1. A hard disc adapted for use in HD computer disc drives comprising:  
a disc-shaped substrate having a first side and a second side, said substrate being sized and configured for use as a computer hard drive; and  
a polymer layer covering at least one of said sides of said substrate
2. The hard disc of claim 1 wherein said substrate is formed from aluminum or an aluminum alloy.
3. The hard disc of claim 2, wherein said aluminum alloy is selected from the group consisting of 1xxx, 2xxx, 5xxx, 6xxx, and 8xxx series aluminum alloys.
4. The hard disc of claim 3 wherein said aluminum alloy is selected from the group consisting of 1050, 3003, 5005, and 6013 aluminum alloys.
5. The hard disc of claim 2 wherein said aluminum alloy is selected from the group consisting of 1000 and 5000 series aluminum alloys.
6. The hard disc of claim 1 wherein said substrate is about 0.2 to 1.0 mm thick.
7. The hard disc of claim 1 wherein said substrate is about 0.4 to 0.6 mm thick.

8. The hard disc of claim 1 wherein said polymer layer is formed from a polymer selected from the group consisting of an imide, an amide, a polycarbonate and combinations thereof.

9. The hard disc of claim 1 wherein said polymer layer is formed from a polycarbonate polymer.

10. The hard disc of claim 1 wherein the thickness of the polymer layer on said first side of said substrate is 0.01 to 0.5 mm.

11. The hard disc of claim 1 wherein the thickness of the polymer layer on said second side of said substrate is 0.01 to 0.5 mm.

12. A method of manufacturing a hard disc comprising the steps of:  
providing a disc-shaped substrate having a first side and a second side, the substrate being sized and configured for use as a computer hard drive;  
applying a polymer layer to at least one of the sides of the substrate to produce a polymer coated substrate; and  
compression molding the polymer coated substrate, thereby fixing said polymer layer to said substrate.

13. The method as claimed in claim 11 wherein the substrate is made from aluminum or an aluminum alloy.

14. The method as claimed in claim 11 wherein the polymer is selected from the group consisting of an imide, an amide, a polycarbonate and combinations thereof.

15. The method as claimed in claim 11 wherein said compression molding step is performed at a temperature of about 150° to 400°C at a pressure of about 1000 to 2000 psi.